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ORIGINAL DEPARTMENT.

LECTURE.

SCARLATINA.

Delivered in the Jefferson Medical College,

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Synonyms.—Scarlet fever; scarlet rash.

It is of much importance to know that these are but other names for this affection, and that they are equally powerful to act as points of contagion for the most malignant attacks of the disease. I am the more particular to mention this point because among the profession, as well as among the people, you will constantly find the mistake made that scarlatina is merely a mild form of the disease, and that scarlet rash is only a disease resembling the fever, but of little importance. I urge you, in every case of scarlatina, to make the nature of the disease fully known, and to insist upon the necessity for the same precautions as in the most malignant form. By such precautions, I mean care as to the exposure of others, and care to avoid those dangers which we are so likely to see following in the train of this much dreaded disease.

Symptoms.—Premonitory symptoms are often so slight as to escape notice. The febrile symptoms set in very abruptly, and usually with great severity; the delirium in many cases is marked, or the patient lapses into a state of stupor more or less profound.

The earliest symptom which almost invariably presents itself is a severe attack of vomiting, which is more noticeable by the absence of the usual causes; the patient, when of sufficient age,

being sure that nothing has been eaten which would be likely to induce such an attack.

This rarely occurs after the first twenty-four hours, and does not continue.

Along with the usual febrile symptoms, which increase toward night and remit toward morning, there occurs a sore throat, which appears with equal suddenness, and generally is very annoying, so as to interfere greatly with deglutition. In examining the throat, the attention will be attracted by what is known as the "strawberry tongue," caused by the papillæ projecting like bright red points on its surface; and the breath is peculiarly hot.

The pulse is extremely rapid, usually reaching above twice the normal rate; the face is flushed; the temperature ranges high from the outset, say one hundred and three degrees Fahrenheit; restlessness is marked, and headache frequently is much complained of.

By the end of the first day the eruption commences, in the form of a fine efflorescence; making its appearance first on or about the neck and upper part of the trunk, in patches which rapidly unite and form a bright, scarlet surface, speedily extending over the whole of the body, reaching the legs and feet last. This rash is almost precisely similar to that which ensues from the application of mustard or heat to the skin. Pressure causes its temporary disappearance, but on removal of the pressure the rash speedily returns. Occasionally the eruption assumes the form of numerous slight elevations, causing a feeling of roughness, or they may form papulæ, in which case the disease is called *scarlatina papulosa*. Some authors mention instances where the eruption appears

like large vesicles filled with a muddy fluid. Along with the rash comes a tingling or burning of the skin, which shortly changes to an irritable itching as the eruption declines. Up to this time the patient exhibits a peculiar want of energy, which now disappears.

These symptoms continue with much sameness for five or even six days, when they begin to decline. The rash gradually fades, the fever lessens, the child shows by its general demeanor that its system is recovering from the first effects of the attack. Desquamation now begins, and takes place in the same order as the eruption occurred. It must be remembered that this is the critical period; first, because it is the time when the disease is most capable of being conveyed to others, and again, because, without the utmost care, the child is exposed to dangerous sequelæ. This process of desquamation varies as the severity of the attack, from an exfoliation of fine scales, to the peeling off of the outer skin in large scales, flakes, or patches; and from the hands and feet like portions of a torn glove or shoe.

This description is presented as that of a typical form of scarlet fever, and may vary greatly in intensity and in the order of the phenomena.

Thus the attack may be so slight that the child continues at its play, and really presents so few evidences of the presence of disease that its dread nature is only shown by the occurrence of anasarca, rheumatism, or other form of sequel. Or, the disease poison may expend its force on the throat, and the disease is then termed the anginose form, or *scarlatina anginosa*. In these cases the ordinary symptoms are usually present in the mild form, but from the outset the throat is much inflamed, the inflammation extending to the prolongations of the mucous membrane into the Eustachian tube, to the internal ear; through the posterior nasal passages up into the cavity of the nose; deglutition becomes almost impossible, fluids being returned through the nose; hearing is greatly impaired; finally, the glands and the cellular tissue of the neck become involved, and by the great swelling that results the patient's neck appears as if encircled with a "collar of brawn."

Should the symptoms continue, ulceration and sloughing ensue, which generally end in death by the opening of an important vessel or by exhaustion.

Cases have been observed where no rash appeared.

Another form is that known as the malignant

type, or *scarlatina maligna*. The symptoms are all aggravated. Profound coma may set in and end in death in a few hours. Or the fever is of great violence from its inception; the delirium marked; restlessness extreme; speedily followed by great and rapid exhaustion and death. Where the progress is not so rapid the rash is of a dark purplish hue; when pressure is made the color is slow to return, evincing a very sluggish condition of the blood; the heat is excessive from the first until near the close, when the approach of death is heralded by a cold, clammy condition of the skin; the pulse ranges high, running up to 150 or 160. Death frequently closes the scene in two to four days, but if the case is prolonged, severe pharyngeal inflammation sets in, followed by ulceration, sloughing and exhaustion.

Other symptoms may occur, of greater or less significance. Thus, many cases, even of a mild form, may be ushered in by a convulsive attack. Here the convulsion is quickly followed by the usual symptoms of the disease, and does not recur. When it does return, or is followed by coma or great depression, the prognosis is doubtful. Especially is this the case when convulsions occur after the eruption has been fully developed. We have the best reason to regard this as a fatal symptom. Diphtheritic deposits may take place upon the inflamed throat, and always add to the gravity of the attack.

The period of incubation of scarlet fever is about from three to six days, but occasionally it would seem as though the poison may remain dormant in the system for a very long period; one authority gives forty days. The author has known one case where it extended to at least twenty-eight days.

The symptoms which may be regarded as unfavorable are prolonged coma, recurrence of convulsions, great delirium, drowsiness, with convulsive twitchings, a dark red or dusky eruption, continuance of very high temperature (105° F. being considered by some as a fatal sign), coldness of the extremities while the trunk remains very hot, renewal or continuance of vomiting, profuse discharges from the bowels, severe anginose affection, the occurrence of abscess of the throat, or the evidence of exhaustion, as shown by a rapid, feeble pulse, panting respiration, etc. But under all circumstances the prognosis must be guarded, as grave changes occur with little or no premonition and with great suddenness.

The differential diagnosis between this and diseases of similar appearance is usually readily made by the suddenness of seizure, vomiting,

rapid pulse, pungent and great heat, strawberry tongue, redness of fauces. The absence of the usual sneezing, coryza, etc. would not cause it to be confounded with measles; the absence of backache and frontal headache would eliminate variola.

Before the eruption appears a very early symptom is a general redness of the middle of the soft palate. Alois Monti says that this may be confined to the uvula, or extend to the anterior faucial pillars and the tonsils, but never to the posterior wall of the pharynx alone, as in smallpox; and in measles the redness of the posterior walls is always greater than that of the anterior. Again, there is no swelling of the parts for the first few hours, as we find in the tonsils in measles. Haviland Hall says that a peculiar punctiform appearance may be noted in the fauces, even ten or twelve hours prior to the cutaneous eruption. This author quotes Dr. Joseph Duggan, of Ireland, as insisting upon a very early pathognomonic symptom; a peculiar, brilliant and glistening stare of the eye, quite the reverse of the watery eye of measles. The eruption in all eruptive diseases generally appears first in the mouth and on its roof, and here the rash of scarlet fever would present its distinctive features of a bright scarlet hue without prominence, disappearing temporarily on pressure.

After the eruption appears, the disease can only be confounded with r  theln or measles. In the first it appears almost simultaneously over the whole body; in scarlet fever it appears on the second day, and extends from the neck to the face, body, and then to the limbs; in measles it appears on the fourth day on the face, and gradually spreads.

The eruption of scarlet fever is uniformly scarlet red, occasionally in large patches, which speedily coalesce without elevation, and disappears temporarily on pressure; the eruption of measles consists of patches of spots like flea-bites; darker red, more like the raspberry color, elevated slightly, and the patches have a tendency to assume a half moon or horse-shoe shape; the rash of r  theln is more like measles in color and shape, but occasionally appears like an efflorescence. Here the diagnosis would be made by the speedy fading of the eruption, and the absence of other scarlatina symptoms.

In making the diagnosis the history and surroundings of each case must always be taken into consideration; thus, if the patient have suffered from any previous eruptive fevers, and the fact of the existence or exposure of the patient to any form of disease.

This disease may be either complicated with or followed by a number of conditions. Chief among these is dropsy, which is often due to an inflammation of the kidneys and is associated with albuminuria. The symptoms which indicate the presence of this complication are serous effusions, generally in the limbs, face or abdomen, more rarely into the lungs, the pleural cavity, the pericardium, or into the submucous tissues of the larynx; a renewal of the fever and restlessness, etc. The quantity of the effusion varies, and with it the gravity of the symptoms. When in small amount, and not in important cavities, it is readily thrown off, and the patient goes on to complete recovery. Death speedily ensues, often within a few hours, when the effusion is intracranial, within the lungs, the glottis, the pericardium, or the pleural cavity. Accompanying and grave symptoms are scanty or entirely suppressed urine, headache, vomiting, convulsions and coma.

In the absence of these symptoms, even with the presence of the effusion in a non-vital locality, the prognosis is favorable, with the expectation of a complete disappearance of the dropsy in from two to four weeks.

Although the grave symptoms above mentioned are generally due to the direct poisonous action of the scarlatina virus upon the kidneys, yet in many cases the liability to these complications is greatly increased by exposure to cold or dampness during the period of desquamation; and this most frequently occurs where the attack has been of a mild form, either from ignorance of the presence of the dangerous malady, or from neglect, under the impression that the attack has been too slight to need any care.

Diseases of the ear and consequent deafness are common sequel   of scarlet fever. In extreme cases the inflammation may extend to the mastoid cells, and even fatal meningitis may finally occur.

Rheumatism of the joints, more or less acute, is very frequently seen to occur during convalescence, and is the result of exposure to dampness or cold, especially after a very mild attack. The pain is usually very annoying, but the redness and swelling are slight.

Occasionally, there are abscesses of or around the parotid and other glands of the neck, or great loss of substance by abscess, or sloughing of the throat.

In rare instances female children have been attacked with inflammation of the vagina, followed by a profuse leucorrh  al discharge, and of a very intractable character.

The intensity of the attack varies, not only in each epidemic, but according to the strength of the patient. As a general rule, weak children are more severely attacked.

Prophylaxis.—Beyond all else is isolation and thorough disinfection of the apartments occupied by the sick, as well as everything carried from them. Clothing, rags, etc., should be burned at once, or if too valuable to be destroyed, should be exposed immediately to a temperature not short of 212° Fahr. Free ventilation of the sick room is eminently required; this aids greatly in diluting, if not in driving out, the poison, and also prevents the unpleasant, perhaps injurious, effects of many articles used as disinfectants.

Many of the common people, and we may include not a few physicians, seem to believe that the efficacy of a disinfectant depends upon the amount of abominable odor that it is capable of giving forth. Hence, chloride of lime, carbolic acid, *asafoetida*, in fact any ill-smelling article is preferred by them as a disinfectant. We believe that disinfection of the discharges, of whatsoever kind, and the prevention of the dissemination of the exfoliations from the skin, will absolutely do all that can be done. Perhaps for this latter purpose we have nothing better than inunction.

Prophylactic medication is yet *sub judice*. The lecturer has, in a number of instances, employed sulpho-carbolate of sodium, and with such apparently good results that he proposes to continue it until convinced that it is useless.

Treatment.—In every case of this disease, whether mild or malignant, much depends upon the care and attention of those who are to act as nurses. The efforts of the physician must be directed to the relief of urgent symptoms, as intense febrile action, the prevention of debility, and of complications.

The patient should be kept in bed in a well-ventilated room, with especial care to avoid the slightest exposure to a draught. In ordinary cases the medicinal treatment will be limited to the meeting of indications as they arise; the patient should be allowed cool, acidulated drinks, and plain, easily digested food. Sponging the whole surface with tepid water is in many cases very comforting. The same effect is produced by the process of inunction. The usual domestic remedy is pure lard, or the fat of bacon. Preferable is the unguentum petrolei or "cosmoline," and where the itching is very annoying, it is better to employ the carbolated preparation, which contains three per cent. of carbolic acid. The inunction should be repeated at intervals, as circumstances

demand, to relieve the dryness and mitigate the great heat of the skin.

The physician must constantly keep in view the tendency to depression, and remember that stimulants are to be employed at the earliest indication of debility. Preparations containing chlorine in some form have long been favorites with the profession, under the belief that this article acts to destroy the poison of the disease. Watson, in his *Principles and Practice of Physic*, gives this formula: "Put eight grains of the chlorate of potassa into a pint bottle, and pour upon them one drachm of strong hydrochloric acid. Keep the mouth of the bottle closed until the violent action has ceased; then add an ounce of water, and shake the mixture well; then add another ounce of water, and again agitate well; and so on, until the bottle is full. The chlorate should be pulverized, and in cold weather the bottle should first be warmed. A tablespoonful or two of this mixture, according to the age of the patient, may be given for a dose, frequently. An adult may take the whole pint in a day."

At present, many practitioners employ a formula containing the chlorate of potassa and the tincture of chloride of iron, regarding this combination as of great value, also, to meet the throat symptoms. When needed, the throat may also be gargled with this combination in honey and water. For the great restlessness the bromide of potassium, or of sodium, will be found valuable in moderate doses, repeated at intervals of an hour or two, until quiet is produced.

Many authorities agree that in consideration of the poisoned condition of the blood, small doses of carbonate of ammonia should be given every two or three hours.

J. Lewis Smith gives the following:—

R. Ammon. carb.,
Ferri et ammon. citrat., aa $\overline{3}$ ss
Syrup. simplic., f. $\overline{3}$ iv. M.

One or two teaspoonfuls every two or three hours.

Some prefer the liquor ammoniæ acetatis, and this, in all cases, should be employed with an excess of the ammonia.

Should the symptoms indicate exhaustion, with the decline of the eruption, quinine should be employed, as also the carbonate of ammonia.

In my own experience, no single remedy has given me such good and such constant results as *digitalis*. About the year 1858 the late Dr. Lewis P. Gebhard read a paper before one of our medical societies, very strongly advocating the use of this article in all the forms of this

disease, and claiming for it the character of a specific. His method was to put one drachm of the powdered leaves of digitalis to twelve tablespoonfuls of boiling water, and when the infusion had cooled, to give it in teaspoonful doses every hour or two, according to the age of the child and the gravity of the symptoms. Since that time I have used it in a large number of cases and with the best results. I generally order it prepared in the same way, and direct the nurse to give it in teaspoonful doses every hour or two, until the pulse and temperature are positively reduced; then to lengthen the interval, so as to maintain the effect thus obtained. I believe that I have almost invariably observed the symptoms to moderate within from twelve to twenty-four hours, and I feel confident that while I have never in a single instance known any of the so-called poisonous effects of the remedy to follow, I have also failed to see the usual dangerous sequela in many cases, and only slightly in any. I have never seen anything to warrant a belief in its usually-dreaded "cumulative effect."

Prof. Bartholow says the antipyretic effect of digitalis is much insisted on in Germany. "In scarlet fever its utility is very great; it lowers the temperature, and maintains the action of the kidneys, thus obviating the two principal sources of danger in that disease." He gives a drop or two of the tincture every hour or two, according to the age, in a little water, or from half a teaspoonful to a teaspoonful every two, three, or four hours.

He further says, that in a considerable experience in the treatment of this disease he has found digitalis uniformly successful, and taking in a group the ordinary cases of scarlatina simplex and scarlatina anginosa, it is the most efficient remedy we possess.

Dr. Sydney Fennel has used it largely in scarlet fever, and finds, when administered early in the fever, the inflammatory action of the glands of the neck subsides gradually. The fever leaves the patient in the usual time, desquamation is slight and the chances of chronic nephritis are reduced to a minimum. He also confidently asserts that the infectious character of the disease is lessened by the remedy, if not destroyed (*Lancet*, Jan. 23d, 1869).

Nearly all recent authors agree as to the value of digitalis in the dropsy following this affection. If they would but employ it from the inception of the disease, they would rarely or ever see any such sequel.

Dr. Lewis Smith ("Diseases of Children") says: "Digitalis will often be found useful, as a

heart tonic, when the pulse is rapid and weak. One teaspoonful of the infusion, or four or five drops of the tincture, may be given every four hours, to a child of five years."

The late Prof. Geo. B. Wood says: "I have found great apparent advantage, in cases attended with a very frequent pulse, from the use of tincture of digitalis."

In my own experience, I have been deeply impressed with the certainty and promptness with which this symptom would be relieved. It must be remembered that the remarkable frequency of the pulse is a prominent symptom.

Before leaving this portion of the subject, I would most earnestly urge upon the profession a fair trial of this remedy, remembering that such a test requires the employment of a good quality of the drug, and its administration with as much care and observation as any other form of remedy. In my own practice I carefully instruct the nurse as to its preparation, how to give it, and then what is to be expected as to its results.

The sequelæ of this disease and their treatment will form the subject of another lecture.

COMMUNICATIONS.

OUR PHYSICIANS AND PREACHERS.

BY REV. E. B. RAFFENSPERGER,
Of Philadelphia.

These two classes of public benefactors are frequently compelled to work in unison. Ordinarily they are by no means disposed to quarrel with each other, and in the habit even of showing to each other pleasant courtesies. But there are times when a spirit of antagonism appears between the members of these learned professions, and they disgrace themselves in the presence of a disgusted public by doing or saying those things concerning each other that are both unseemly and unjustifiable. The writer of this article happens to be a minister, but a constant reader, for several years past, of your valuable *REPORTER*. In early life his tastes drew him toward the medical profession, and while passing through his collegiate and theological training at Princeton, he enjoyed the rare privilege, during his vacations, of listening to the celebrated lecturers in the great schools of medicine in Philadelphia and New York. His opportunities in this line gave him a deep interest in that branch of science. In subsequent years his experience as pastor furnished him with practical exemplifications of the relation of the physician to the

preacher. Among his most valued friends and co-workers in the ministry have been men skilled in the healing art. With the exception of about a year, during his whole life as a pastor, he has had one or more physicians in his congregation, and his relations to these men have been very pleasant. It is a singular fact that during the twelve months referred to he was called on less frequently than usual to conduct funeral services, but it was really the most gloomy year of his life. He had no "beloved physician" with whom he could consult in the hours of his loneliness!

There are times in the experience of pastors when there happen to be in their congregations representatives of several schools of medicine, or different representatives of the same school, and all devotedly attached to the pastor! Then it requires considerable tact on his part to prescribe for all the doctors in such a way as to give offence to none! A pastor is greatly to be pitied who happens to have in his church a physician of inferior attainments and low instincts, who is courting the custom of the congregation and unduly anxious to secure the patronage and influence of its pastor. The meapest use to which a Christian congregation can be put is to employ it as an advertising medium. No right-minded physician will ever find fault with a pastor or a church for exercising the right of private judgment in respect to the choice of medicine or the administrator thereof.

But if the parish preacher and the parish doctor can harmonize on the theory and practice of medicine as well as on the theory and practice of religion, there cannot be found elsewhere in the wide, wide world, two men who may be more useful to each other. In fact, to my mind, they appear to be necessary to each other's existence as well as usefulness. In the olden time the functions of the healer and the teacher were united in the same individual, and he figures on the pages of ecclesiastical history under the name of *Apostle*. Those were happy days for the afflicted public, who had need both of healing and teaching. Among the list of preachers in subsequent years, there have been none equal to Peter and Paul, and among all the disciples of *Æsculapius* there have been none who have done for the healing art what those celebrated worthies did. Then the two professions were happily combined. Now, unfortunately, they are separated, and so it comes to pass that we have in these latter days poorer preachers and

poorer doctors than were known in New Testament times!

But ought not this fact in respect to their common origin draw the physician and preacher very closely together? We do not contend that these professions should form a partnership for the joint transaction of business, but that these two arms of the public service should so work as to aid each other in the alleviation of misery and multiplication of happiness. Let each man know his place and comprehend the nature of his mission. No doubt, it was very kind in the good old dominie, while circulating among his sick parishioners, to prescribe his favorite remedy—mustard-seed poultice—for all the ills his people were heir to. His judgment was so good in other matters that the people were in the habit of consulting him on all occasions, and he was free to recommend his poultice in all cases of sickness, even after the parish doctor, an elder in the church, had given his prescription. When the physician found that some of the people were silly enough to prefer the advice of the preacher to his own, he secretly concluded that the poultice remedy was becoming too monotonous in that region, but how to convince the people of their folly was another thing. Fortunately for the doctor, a crack in the church bell made it necessary for the dominie to call a parish meeting, at which he presided, to devise ways and means for restoring the tone of the bell. The hideous noise that came from the belfry whenever the sexton pulled the bell-rope distressed the ears of the people, and everybody was anxious to remedy the evil. One of the speakers recommended filing the fracture; another suggested an exchange of the old bell for a new one; and the third one proposed recasting the bell. The doctor now rose and astonished the people by reminding them of a sovereign remedy, so often prescribed by the moderator of the meeting in severe cases of sickness, viz.: the application of a mustard-seed poultice! He advised the congregation to try its efficacy on the cracked bell. In Latin, the prescription would probably be *Cataplasma usque ad nauseam*, but the congregation at once understood the English of it, and the dominie, after that day, ceased to prescribe!

We hear, occasionally, of a minister who attempts, in the sick room, to act independently of the physician. This is all wrong. The preacher has no right to interfere with the physician, or even to visit the patient, in case of severe illness, without the advice or concurrence of the physician. No matter what may be my interest in the

welfare of a member of my church or congregation. He may be the dearest friend I have on earth, and the physician of his choice may be an atheist, but he is responsible for the life that is imperiled, and I must act under his direction. It has been my duty, in some cases, to work with physicians whose religious opinions were repugnant to me, but I have always recognized the principle just set forth, and am happy, here and now, to say that in thus acknowledging this undoubted right of the physician over his patient, I have been met half way, and no physician has ever, to my knowledge, attempted to interfere with my duties as a Christian minister.

I regard it as a sacred duty on the part of the ministry, not only to show a friendly disposition to the medical profession, but to use our influence in maintaining its dignity. I have often admired the heroism, as well as self sacrifice, of the men who have not a single moment that they can call their own, and who are under so rigid a code of ethics that they cannot maintain their standing in the profession if they give the least countenance to quackery. As a class, the ministry is receiving large benefit from their brothers, the doctors. It is sad to see, occasionally, how a minister can cheapen himself by allowing the use of his name in the attempt to popularize a patent medicine. Some good and great men in the ministry take a different view of this subject, and declare their independence of what they are pleased to term the restraints imposed on them by the medical profession. But there are no restraints imposed. Each minister is free to act for himself in this matter. His reaping, however, will be according to his sowing. If he is willing to countenance practices that are condemned by the learned men of a profession that commands our respect, and that is closely allied to ours, and is in living sympathy with ours, he may expect but little help from physicians, as a class, in his mission as a minister of religion. It is highly important for both professions, that the members thereof should be in full accord on all practical questions. There may be a question as to whether the exigencies of the public service demand any quacks except those belonging to the order *Anseres*; but the world has need of all its physicians and all its preachers. The wants of the soul no less than the wants of the body require attention. There is no method that will remedy the crying evils of our social system and rescue the miserable outcasts from the slums of our cities, and help them to the "higher life," that ministers only to the body and neglects the soul.

HOSPITAL REPORTS.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

CLINIC OF FESSENDEN NOTT OTIS, M.D.,

Clinical Professor of Venereal Diseases.

Syphilis.

GENTLEMEN:—I understand that we have today an initial lesion of syphilis, which is characteristic, presented to the clinic just as I was coming in. I have not had an opportunity to examine it, and I think this will be an advantage, inasmuch as we can pursue the examination together, and gain information in regard to the true character of the case, so far as we can go. So we will treat this case as though it had just come to our office, and try to find out what is the matter with him, and what is best to be done. We will ask when he first noticed this, taking it for granted that it is a venereal lesion, for men generally appreciate this fact when they come to see us. First, how long has it been since you had connection? "It has been eight weeks." Had you had connection before that time? "Yes, sir; it was six weeks ago, two weeks after the connection, that I noticed this on my penis." The patient says he had no reason to suppose he should have got this trouble from the party with whom he then had connection. It would seem there was an interval of two weeks between the connection and when he noticed this on the penis. It is sometimes very difficult to get accurate information with regard to time in these affections.

Lie down here, and let us make a careful examination into this matter. Gentlemen, there seems to be an epidemic of phimosia this year. This patient has phimosia. I think we must have had here and in the hospital at least twenty or thirty cases of it within the last month.

Now, we have here a characteristic condition, an apparent sore or lesion without any loss of tissue. On the contrary, there is an apparent increase, and there is nothing like a destructive action going on here, as far as I am able to judge. Here is a superficial sore about the size of a silver three-cent piece, and there is no accumulation of pus there. There is no evidence that supuration is going on. There is a superficial erosion. That is what we call a chancreous erosion. This seems to be, then, one of the forms of initial lesion, and if it is so, as I put my finger upon it I shall find more or less induration, this depending upon causes which we shall consider very soon.

As I put my finger upon it I find that it is distinctly hard; it is not sensitive, it is not sore. Now, if any of you wish to do so, I would like to have you come down and gently touch the finger there, and you will realize what I have realized in touching it, that there is a body or material of cartilaginous hardness at that point, just beneath the superficial layer of integument.

Bear in mind that this is not a destructive action; it is not an ulceration, for reasons which I explained to you a week or two ago; the parts are quite supple in every way, except just there. Always when you put your finger on a sore like

this, which is open, be careful that you have not a little breach of tissue. If you get a little secretion from such a sore as that into a hang-nail, it may communicate to you syphilis. I had quite a fright the other day myself, in that way. I do not think I have been so much troubled in mind before as I was three or four days ago, when a doctor brought a patient to me who had a paraphimosis, the cause of which was evidently an initial lesion. In endeavoring to reduce it I inadvertently slipped my finger under the constricting band, and the sore folded over on to my finger; that is, the free surface, the secreting surface of the sore folded over on my finger, and on washing my finger a few moments afterwards I felt a little soreness on the side of it, and I found that I had a hang-nail that had been bathed in this secretion. Well, I felt very unpleasantly, indeed, and I got out my bottle of nitric acid as soon as possible, and was just about to make a very positive application, when I remembered that early in the morning I had pounded that finger, accidentally striking it with the hammer. I then took a magnifying glass and looked at it, and found the skin was unbroken; there was a little blood effused under the surface, and I was delighted to find the skin was not broken.

I speak of this to show you how easily one might take syphilis. Now it is quite possible that, had the skin been broken, and I cauterized it five or ten minutes afterwards, syphilis would still have been communicated. There might have been this little disease germ, of which we have spoken before, in such a relation to the open mouth of a minute lymphatic vessel that it should have been carried beyond the reach of possible cauterization. It is said in a general way, by some, that there is no such thing as stopping this; others say it may be destroyed. I have no doubt that in certain instances this syphilitic material may be destroyed after inoculation has taken place. In other instances I believe it cannot be destroyed. It depends upon the extent and the condition of the surface of inoculation and its relation to the lymphatic vessels. If there be a superficial lymphatic vessel ready to take this material up, it carries it out of the reach of cauterization at once. If, on the contrary, the material lies superficially, and has only been able to penetrate into a little lymphatic space, then you may destroy it. It is always worth trying, under every possible circumstance of inoculation. When it is sufficiently recent to give you any hope of success, you should not hesitate to cauterize; I should do it even days afterwards.

Now, here we have this erosion and this induration; the induration, as I was showing you last week, consisting, as shown by microscopical examination, of an accumulation of cells, cells just proliferated at this point, and for the reason which I explained to you, excited by the addition of an unusual stimulant to proliferation, this stimulation being a diseased germ, a degenerated white corpuscle. A microscopical examination shows that there is nothing but a packing of white blood corpuscles in such a way as to show that these cells have proliferated *in loco*; that they have come to this point as white blood corpuscles ordinarily come to a simple injury. But

here there is a hardness, a hardness that is caused by the filling up of vessels and the walls of the vessels by these white corpuscles; whereas the walls of the vessels are not invaded in simple inflammation. That is why this is so much harder than in ordinary induration from inflammation.

Now, this accumulation is very positive, and it is in direct relation to what is called the period of incubation. Clinical observers have been at great loss to know why it is that in some cases there is an authentic incubation of only twenty-four or forty-eight hours. There are not many such cases, but I think we have a right to say there are some which have been reported under good authority. In others the period of incubation has been as long as seventy days and over. Now, of course, it has been said that this difference in the time of the incubation is due to the character of the virus. When we come to inoculate a number of persons with the same specimen of virus, we find the period to correspond pretty well in the several cases, the average length of time being about twenty-one days; but curiously enough the experiments were all made upon the integument, and the experimenters had not in view the ideas which I am now advancing. Now, what are we to do about this period of incubation, knowing that this material extends very readily (taking the view, as we have commenced to do, that this case is one of syphilis, and that this material is a lymphatic material, a disease of the germinal elements alone, and is confined to the germinal canals practically, and these canals are the lymphatics, or the tissue spaces and the canals of the lymphatic system)? Now, the accumulation of these cells at a local point would be, necessarily, at first in the lymphatic spaces, the tissue spaces which are found everywhere where we find this nutritive fluid. The nutritive fluid, the lymphatic fluid, the lymph, whatever you may choose to call it, bathes the parts at the point of abrasion where the germ or principle of syphilis touches. Then proliferation goes on, such as we have shown by real experiment takes place in the white blood corpuscles, and if that accumulation goes on, it goes on only in the line of the lymphatic vessels; first in the lymphatic spaces about the vessels at a given point, and in the lymphatic vessels themselves when it moves away from that point. You may say it is unreasonable that it should remain at that particular point, and not at once go throughout the system. But we know it does remain there, that there is no evidence that the system is infected until it has been through a certain curriculum. We have it at this point, and when it moves on, the first physical indication thereof is some places of accumulation of this same cell material in the lymphatic cord which runs along the top of the penis. We know from actual examination that it is a lymphatic vessel. We know, then, that the track of this accumulation is along the lymphatic vessels, and not through the blood vessels, which would carry it directly into the circulation. Then the next thing we find is, enlargement of the glands in the groin, and they are enlarged with this same material.

Now, why does this material accumulate in the

lymphatic vessels? This is a question easily answered with our present knowledge of the office of the lymphatic vessels. At one time their office was unknown. They were supposed to be absorbents. But they were found to constitute a channel in which certain fluids were ever moving from the superficial portions of the system toward the centre, and as they are found everywhere in suitable relation between the veins and arteries to answer as drainage vessels, as it were, and always contain germinal material, the idea was conceived that they answer the purpose of carrying back into the general circulation the nutritive material which is carried out in excess of the necessities of growth and repair in the tissues. Now, this seems a very common sense view of the matter. If you or I were going to build up such a body as this, we would naturally think of some means of carrying back the material which we did not want to use for building up tissue. This view of the use of the lymphatics has been accepted by one of the most recent authorities in physiology, namely, Foster, and a number of advanced and prominent men have accepted the view that the office of the lymphatics is that of a modeling system, a system which carries back into the general circulation this germinal, nutritive material which has been exuded into the tissues beyond the necessities of growth and repair.

We may now consider with propriety what are the conditions, and what the time required, for this material to get back into the general circulation, and I will show you positively that we can account for the reasons why this disease germ of which we have been speaking stops here and there on its way into the general circulation. I am going to show you how the different periods of so-called incubation are established.

In the first place, we have the primary incubation, or the period after inoculation, of three or four weeks, before the induration makes its appearance. Now, we will suppose, if you please, that the disease material finds some difficulty in gaining access to the lymphatic vessels, for the lymphatic vessels are not everywhere. There are spaces, but vessels running to lymphatic glands do not exist everywhere. Now, this disease germ which has entered a lymphatic space becomes incorporated with a white blood corpuscle, in the manner which I described last week, and they increase by the increased activity imparted by the presence of this stimulating material. The process of proliferation at that point is increased. Another thing to be taken into account in explaining the accumulation of these cells, is, that the proliferation is going on where the circulation is retarded, or where it is slow. This proliferation goes on until it extends to a lymphatic vessel, and we have such an accumulation of material here as gives a cartilaginous feel. After it has extended to the lymphatic vessels, we put our hand in the groin and find the lymphatic glands there enlarged, as I do in this case. The same process which existed at the point of inoculation has been transferred to the lymphatic glands. This is always the case. It does not find its way into the system in any other way than through the lymphatics.

You ask why the blood is not affected? If we stick to our original text, we will see that we have a material which cannot by any possibility combine with the blood. It is unformed germinal material, and can only combine with material of its own kind. It cannot combine with red blood corpuscles because these are a higher form, they are elevated above the white. Foster accepts this as true. It cannot, I say, blend with a red blood corpuscle. It must, by its amœboid movement, make its way into a cell, and then, as does a white blood corpuscle, find its way among the red corpuscles. This is the reason why it does not go through the system as the poison of other contagious material. It goes along in this sort of way, coming in contact with germinal material, and consequently keeping to the lymphatic spaces, in close contact with the lymphatics, finally filtering through and working its way to the glands of the groin, and there it is held.

We have seen how it may be held for days and weeks, constituting the first period of incubation, before it gets into the lymphatic vessels. Now, in order to show you that this is more likely to be the case than any other, we have circumstantial evidence of the most positive character. A very distinguished surgeon in the Confederacy, a number of years ago was making an amputation on a syphilitic subject, and injured his finger with a spicula of bone. That night he found an enlargement of the glands, with a little engorgement which produced a red line, and discomfort, and that night, or the next day, he found the glands in the axilla enlarged, and within six weeks from that time he had a general roseola. The wound of the finger healed without the slightest evidence of any hardness, or anything whatever to show its presence. Yet, he had not only the secondary syphilis, but this was followed by tertiary lesions. The doctor gave me the history of his case himself, after I had made an argument in favor of this view of the period of incubation before one of the societies. He came forward, after the lecture was over, and told me his case in support of my view, and I consider it one of the strongest proofs I have.

Another proof is, as we shall see constantly at this clinic, that in all cases where there is a short period of incubation, as of three, four, or five days, the lesion is near the frænum. Now, men who have made the lymphatic system a study, tell us that the lymphatics come more closely to the superficies of the body at the frænum than at any other point; in fact, that they lie there just underneath the epithelium. This, I say, is a reason why in one case we have a short period of incubation, while in another a long period. The period of incubation, when inoculation has taken place on the body of the penis, is also short, for here, too, the lymphatics come very close to the surface. So that we have a reason for this difference in the length of the period of incubation which is verified by microscopical and clinical observation, and we have an explanation of the way in which the lesion is formed, and the course the virus takes to get into the general system. After the glands in the groin have been reached, if the lesion first be on the penis, or the glands in the neighborhood of the initial lesion,

wherever this may have been, there seems to be an arrest of proceedings. We hear nothing about syphilis, or any sensation or sore of any kind, on the part of the patient, under thirty or forty days. That is the second period of incubation, so-called. Now, if the system, as is claimed by some, be pervaded throughout with this poison, why this stay of proceedings? There must be some reason for it. The time has passed when we could accept it as a mysterious matter and let it alone. We find that there is a convulsion of vessels in the interior of this gland, through which, as the germ enters the gland, it requires a long time to pass. There is here a gummy fluid which holds this disease material, obstructs its progress, but not entirely, for it has its amoeboid movement, and finally passes through, requiring, however, about forty days. Then we find an eruption coming out. We know that this does not amount to much. It comes out when a man is feeling perfectly well, as I showed you last week. It is only a roseola, which never becomes anything else; never becomes a papule or an ulceration. It comes and goes as a roseola. It fades out and leaves a copperish tint, and I suppose that everybody, almost from the beginning of the history of syphilis, has recognized these copper-colored spots as due to syphilis. Now, we know, later, that this is not a fact. That is, microscopic observation tells us that it is hæmatoidin that gives us the copperish color. It is crystallized blood, hæmaglobine which we find under the skin. And in this way we may account for all sorts of staining. Blood has been effused.

Now, what causes blood to be effused where no injury occurs? Of course it must be by some loosening of the vessels. How are blood vessels loosened? By their nervous influence being loosened: by a sort of pyresis of the nerves connected with the vessels, which allows the vessels to relax and the blood to exude. We understand that all cases of roseola are caused by pyresis of the blood vessels, which lets the blood out for a brief period, and then, in most instances, it passes away; is transitory. And that is one of the differences between the irritation that produces a gastric roseola and that which produces a syphilitic roseola. In the first case it is more temporary, as the gastric disturbance passes off; in the latter case it is more permanent, and why? Because it is connected, as you know, with the sympathetic system. I think it may be shown through circumstantial evidence, independent of any other; for when the vessels of the lymphatic system have permitted the passage of these germs, or this material, into the receptaculum chyli, they go with a rush into the subclavian vein and are turned suddenly into the general circulation. Now, would you not think that enough to affect the sympathetic system, when a word will do so in the case of a sensitive woman, calling forth a blush? Many of you know of cases here where a sense of shame or mortification has brought out a roseola upon a sensitive woman, which remained for hours. An oyster taken by some very delicately organized persons will bring out a roseola in a very few minutes. If a word will do it, if a thought will do it, why refuse to believe that a

myriad of these active bioplasts, diseased and active germ elements, poured suddenly into the circulation, should produce an equal effect? We have to suppose this, because we cannot follow that thought with our microscope yet. But circumstantial evidence is in our favor, as now, for the first time, this disease element has gotten into the blood, and this is the first positive evidence of it. It now has access everywhere, as a matter of course, because where the blood current goes it goes. And now the superficial capillaries begin to get full of these cells. Why? Because they go just as far as they can go, and that is into the papillæ cutis. They cannot go further. In this diagram you will notice blood capillaries coming up into the papillæ cutis, and following right up underneath is a lymphatic capillary, intercalated between the veins and arteries, and in the papillæ cutis is ever present this lymphatic vessel, the office of which is to carry back material exuded in excess of the needs of growth and nutrition. Now we have this disease germ, or the white blood corpuscle that has received this influence, passing with the rest of the elements of the blood until it gets to that point where a certain amount of it is exuded for the purpose of repair and growth, and it is at a point where the circulation is slowest, so that we find it in the most favorable condition for proliferation. We have this material in exactly the locality where we would put it if we wanted it to proliferate. We would naturally suppose that here we would get an accumulation of cells.

Now, recently the microscope has been brought to bear upon a great many things, and to me not the least interesting are the papules of syphilis. They have been found to consist of cells exactly like the cells we find in the glands, like the cells we find in the induration of the initial lesion. So far we have a right, then, to suppose they are the same. A distinguished observer, who is authority now on microscopical examination, says of these syphilitic papules, in opposition to views formerly entertained regarding them—namely, that they were enlargements of hair follicles, of sebaceous glands, of one thing and another—that they are always located in the papillæ cutis, and if they are found anywhere else it is only because this accumulation has enclosed a sebaceous follicle, or a hair bulb. But they always begin in the papillæ cutis.

Now we find the eruption following immediately the access of this material into the general circulation, an eruption of peculiar character. It is what is called the papillary eruption of syphilis, which consists of elevations of the skin, caused by the accumulation of this germinal material, which is confined to the papillæ cutis.

Here is another patient who has the eruption on the skin, and if we inquire into his history I doubt not we shall find it coincides with the theory we have been advancing. How long has it been since you had a sore on your penis? "Three months." How long have you had this eruption? "Two weeks." From what we have said, gentlemen, you know why he did not have this eruption when he first had the sore.

If, as some authors claim, the poison pervade the system from the moment inoculation takes place, why did he not have the eruption from the first? According to that view, the eruption should certainly have been out within a week, or at most a fortnight from the time of inoculation. Instead of that it did not come out for nearly three months. Why did it not come out before? Because of the course it must take, which we have just been considering. But when we do find it, we know it is nothing more nor less than an accumulation of this germinal material, which, under the microscope, cannot be shown to be different from healthy germinal material. This eruption has a peculiar color, a copper tinge, and because of its being of a copper color it is called by some syphilis; but it is not because of the copper color that it should be called syphilis. It has a copper color because blood has been exuded. The copper-colored eruption would mean nothing in the way of syphilis if there were not a syphilitic history back of it. A simple eruption upon the skin does not constitute syphilis, for an eruption may be due to various causes, but you should take a step back in the history, and learn about the initial lesions, enlarged glands, etc.

Here we find spots which show that there has been an eruption previous to this, a roseolar eruption, and that never develops into this papular eruption, for reasons which you can understand. The cases are different. But now we have a papular eruption of syphilis, characterized by certain peculiarities of form and locality, but not essentially so, because in one case the papules are located where they are as big as a sixpence, while in another they may be distributed all over the body, no larger in size than a hemp seed. You have in your books on syphilis half-a-dozen varieties of the papular eruption of syphilis. Then you have the pustular eruption, and its varieties. Now, these divisions are unnecessary to an understanding of this subject. It is well enough to know about them if you intend to write a book upon the subject, or if you wish to make very nice distinctions, but what you want above everything else is practical knowledge, which shall enable you to understand what it is that is producing this condition, and what you shall do for it. Instead of making out all these varieties of papular eruption, you should go back to the commencement of the history of the case, and if you get a straight history, a history of initial lesion, followed by enlargement of the glands in the groin, then of the glands at a distance, then by an eruption, you have, no matter how the eruption looks, a case of syphilis, and by treating it as such you will be on the right way.

Now, here is another patient, and he has a pustular eruption, with scabs at different points. In the other case there was a papular syphilide; in this, a pustular syphilide. The difference being, that one has suppurated and the other has not. They are both caused by an accumulation of cell material. Why one should suppurate and the other not, I cannot tell. It depends upon some dyscrasia, I know not what. An eminent authority in skin diseases says these papules are

formed of cells, which under certain circumstances are heaped together and form a detritus, and make pus. Now, shall we make another variety of skin diseases because this patient has some condition of things which induces suppuration? The papular eruption on this other patient may change into a pustular eruption within a week, or he may have some papules and some pustules, so that we will have to make another variety, a papulo-pustular variety. A great deal of time is spent unnecessarily in making out these varieties of the eruption. The one important thing for you to recognize is the cause of the eruption; whether it be due to syphilis. You will know when you see the patient, if he have a pustular eruption, whether he will require different treatment from what he would were the eruption of a different variety.

Let me repeat that the syphilitic eruption is not caused by any destructive principle in this germ material, these blood bioplasms. It is caused by their indolence, their helplessness, and tendency to heap together so as to interfere with the processes of nutrition. In some cases this is carried to such a degree that suppuration occurs.

Now, what we want is to get rid of them. How can we do it? By the administration of mercury. And we should not content ourselves with saying simply that mercury is an antidote for syphilis. We should understand its action. We have in mercury something which produces in healthy tissue fatty degeneration, and when we have an accumulation of material in the system, and wish to get rid of it, we use that agent which, above all others, has the power to produce fatty degeneration, that is mercury. That mercury has this power we know from clinical experience. But we give it now, not with the idea that it is an antidote for syphilis, but with the idea that we have this accumulation of material which we wish to get rid of. Ricord said, a few years ago, before one of the societies in London, when called upon to speak upon this subject, that he believes syphilis can be cured, and that it can be cured by giving small doses of mercury for a long period of time. If a patient who comes to me says he cannot spend the time to be treated a year, I tell him to go away; I cannot treat him.

Then, gentlemen, you see that our course of reasoning from circumstantial evidence has brought us to this point in the treatment, that this accumulation of cell material is to be gotten rid of by fatty degeneration, that mercury is the remedy which best fulfills this indication, that it should be given in small doses, just sufficiently large to produce this effect, and not large enough to disturb the healthy structures of the human organism. Clinical experience as well as reason verifies the propriety of this mode of treatment.

More About Trichinosis.

An inspector of hams in Hamburg celebrated last month his discovery of trichinæ, in a round thousand of American hams since January, 1879. In Berlin, in September, out of 11,116 hogs killed there were only seventeen found trichinous. No wonder, from such facts as these, which we find mentioned in the same Berlin exchange, the Germans are growing fearful of our products.

MEDICAL SOCIETIES.

THE TRI-STATES MEDICAL SOCIETY.

Sixth Annual Meeting, held in Louisville, Ky., Nov. 9th, 10th 11th, and 12th, 1890.

Reported for the MEDICAL AND SURGICAL REPORTER, by A. H. KELCH, M.D.

The Tri-States Medical Association, composed of representatives from the States of Indiana, Illinois and Kentucky, opened its Sixth Annual Session in this city, on Tuesday, Nov. 9th, with about fifty visitors present. The President, Dr. H. B. Buck, of Springfield, Ill., called the Convention to order at 10 A. M., and the exercises then began, after an invocation by the Rev. Jas. P. Boyce.

Mr. Laf. Joseph, chairman of the Common Council, was first introduced, and in an address of welcome in behalf of the city, briefly spoke of the fitness of holding the convention in this city, where, no doubt, many of its members graduated; addressed a tribute to the philanthropy which is the foundation principle of the medical profession, and likewise extolled it as being the source from whence literature has derived some of its brightest stars, and from which has been born unto science some of its greatest philosophers. He spoke of the great opportunities which the duties and responsibilities of medical men gave them to become acquainted with the weakness of poor human nature, and praised the profession in which so few use that knowledge for other than philanthropic and honest purposes, closing with the following strain: "Whether you come from where the clear limpid Sangamon washes the borders of the flowing prairies, or from the beautiful banks of the broad Kankakee, or the swift flowing Wabash; whether from the cliffs that so majestically overlook the rushing Kentucky, or from the gently undulating slopes which border the Cumberland and the Tennessee; whether you come to renew friendships, formed years ago, or to form new ties; whether you come to seek rest from a busy season, or gain new thoughts at the feet of the great men assembled here; whether you come to again feel the genial warmth of the encircling arms of your *Alma Mater*, or to furnish rich drops of thought from the overflowing fountains of your own fertile brains, you are welcome to our beautiful city, welcome to the warm hearts of her hospitable citizens; and when your labors here shall have been completed, we wish you all a happy return to your homes and your duties, refreshed by your season of good fellowship, and better fitted for your struggles against fell disease. In the name of the city of Louisville, I bid you welcome and good cheer."

Immediately after Mr. Joseph had spoken Gov. Blackburn, who is also a member of the medical profession, was introduced and delivered an address of welcome in behalf of the State, in which he said, "more temporal good has resulted to the world from the discoveries made by men in your profession in the last century than from those of all other professions combined." Anticipating the pleasures of the meeting likely to ensue at the proper time, he "hoped that the

utmost good humor would prevail in the discussion and honest differences which would probably arise between the members, on questions not definitely settled; that harmony would be characteristic of the meeting, and that deference and courtesy would be shown by each to another."

Dr. E. R. Palmer, of this city, was then introduced, to speak in behalf of the profession of the city.

Dr. Palmer referred, in his characteristic way, to the meeting of the American Medical Association, at Cincinnati, in 1866, when the East had determined to attempt the renewal of that national professional friendliness that in antebellum days had had its embodiment in the American Medical Association. The appointed day came, and with it, from every quarter, members of the delegation, which was small, but representative. Dr. Davis, of Chicago, the father of the Association, spoke hopefully, yet doubtfully, of the future, and for the moment it seemed a question whether good would come of the meeting. At this juncture a Kentuckian took the stand. He spoke regretfully, yet manfully, of the past, and as his mind filled with the recollection that in all the bitterness and bloodshed of the war the bond of professional brotherhood had ever proven too subtle for the sword, too solid for the bullet, he warmed to his theme, and in the name of every doctor in the South extended the hand of fellowship to the profession of the North. . . . We meet to-day under similar circumstances to those which surrounded our brethren at Cincinnati. A battle has just been lost and won, fought, as of old, on the miserable issue of sectionalism. The smoke of the conflict clears away and again the sun shines on American doctors in council. The Northern doctor has crossed the Ohio, assured of an honest welcome by the profession of Kentucky. The press tells us that with the conflict just ended old issues must pass away and new problems come to the front, before which a "solid South" and a "solid North" must break in pieces. God grant that they may break, if they break but to blend, so breaking and so blending that abstract issues shall succeed to social issues and polemical tilts supplant forever sectional broils. All of the strongest ties known to man bind together the States represented here to-day, and I feel assured that if the voice of the people, which is the voice of God, be half heard, that bond can never more be severed.

You have come, gentlemen, to the metropolis of a people known the world over for possessing and producing the greatest comforts and delights of life—Kentucky tobacco, Kentucky horses, Kentucky whisky, and last, but not least, Kentucky women. Go where you will, from Orient to Occident, the world teems with their praises. You are to meet and mingle with a profession rotund and complacent under their benign influences. The best wish I can bestow upon you is that you may catch the infection while you stay, and bear its solacing power even unto the ends of your lives. Our latch-strings hang on the outside of the door, and our wives and daughters stand ready to fill the pipe and draw the cork if you will but enter. Again I bid you welcome to our city and our homes."

These addresses were briefly responded to by Dr. J. W. F. Gerrish, of Seymour, Ind. The reports of the various committees and officers occupied the remainder of the forenoon session.

AFTERNOON SESSION.

At 2 P.M. the Association again convened and the regular presentation of papers began. The first to respond to the call was Dr. J. V. Black, of Jacksonville, Ill., who read a paper on the "Hysto-Pathology of Scarlet Fever." Dr. Black accepts the common definition of the disease, holding it to be a contagious epidemic disease, propagated by a peculiar and specific poison, the effects of which are manifested upon the constitution, and then locates the characteristic lesions of it in the squamous epithelium of the skin and the columnar epithelium of the alimentary tract, and those tissues derived from the same thelia out of which these are evolved. The evolutions of the external blastodermic, endodermic and internal blastodermic membranes to form the various parts of the system were then considered, and the relations between the parts traced, in order to maintain the proposition concerning the seat of the characteristic lesions. The rash was considered a prime and typical phenomenon, and it was noted to consist in an inflammation of tissues that have no vascular system, and generally no nerves, and hence but two of the symptoms of inflammation can be manifested. Acknowledging the fact that redness is one of the distinctive characters of the rash, he denies this redness to belong to the tissue itself, but attributes it to the expansion of the capillaries between the tissues involved in the inflammation; that while there was hyperæmia the capillaries were not further involved in the changes. Dr. Black finds in the discovery by Fenwick that the basement membrane of the sweat glands is thickened and sometimes lost, an explanation of the bleeding surfaces sometimes seen. From the sweat glands, he says, the inflammation quickly extends to the epithelium and soon involves it entirely. From this, however, it is not to be inferred that scarlet fever attacks the sweat glands especially. This is not the case. It is not the sweat glands, as glands, that is the point of attack, but their epithelium. As evidence of this he adduces the example of burns which have destroyed large portions of the skin, in which the glands are not renewed; the epithelial covering here is attacked by the rash as quickly as any other portion of the skin.

Speaking of the connection between the fever and the rash, he says that while the fever is known to precede the appearance of the rash for a few hours, its inflammatory character suggests the idea that they begin together, and that the fever is largely a consequence of the rash, although apparently preceding it. To prove the inflammatory character of the rash it is noted that the epithelium is softened and more easily removed, and that these changes are the result of inflammation and showing more than simple hyperæmia.

On the subject of the desquamation the author of the paper remarks that there is such a close agreement that it might seem superfluous to add anything. He holds, however, that the des-

quamation extends to the epithelium of the alimentary tract and the tissues differentiated from it, and that this extension of the desquamation accounts for many of the results which are known to follow an attack. He adduces in favor of the theory that Dr. Hall, of London, found intestinal lesions in scarlet fever, sufficient to lead him to consider that a close relation exists between it and enteric fever.

In connection with the involvement of the kidneys the author says there is an error in the minds of many with reference to its nature; it is regarded as a complication, while, in fact, it constitutes one of the intrinsic characters of the disease. The fact that it is a grave feature in some cases does not make it any the less a factor of the disease, and we have reason to believe that it figures more largely in the beginning of the disease than is generally supposed; the affection here being at this time overshadowed by the more prominent and apparent conditions. Very early in the disease the cortical substance is particularly the seat of morbid changes. There occurs here the analogue of what occurs in the sweat glands of the skin. The blocking of the tubules gives rise to inflammation by the retention of irritant material, and when the stage of desquamation comes on the tubules are unable to force themselves from the accumulated epithelial casts; a mechanical effect ensues which is superimposed upon that already existing. The structures derived from the endothelium present, as might naturally be supposed, a healthy appearance. The fact that these are widely separated, both in structure and function, from those of the epithelial basis would indicate their exemption. Still, the rapidity with which the blood courses through the circulatory system favors the idea that they are more or less involved.

Of the respiratory system we have more definite knowledge. Almost every author who has had anything to say upon this subject proclaims that when the inflammation extends to the air passages it should be considered diphtheria or croup. We have the most satisfactory evidence that in most cases the respiratory epithelium is exempt except where it comes in contact with the squamous epithelium. At these points there is more or less change in the type of each of the thelia, constituting an intermediate type. Notwithstanding this fact, however, the scarlatinous inflammation does not cross the line so readily as might be supposed. If the inflammation be severe, however, as sometimes happens, and it pass to the respiratory epithelium, then the changes which take place are, no doubt, of a different character from those which take place in the squamous variety; different in that the tendency is to rapid destruction of large portions of the covering. The large number of cases in which the auditory power is destroyed makes the consideration of the extension to the middle ear of importance. This extension undoubtedly occurs through the medium of the Eustachian tube, and this readily occurs whenever the line is once crossed and the inflammatory process has begun in the respiratory epithelium. The crossing of the line at the glottis is a much more rare occurrence, but when it does occur it is characterized by the same destructive processes which

occur in the auditory canal and nasal passages. The involvement of the tonsils and post-lingual glands is a point of the utmost importance; they seem to form a common point for the inflammation to take its origin. This seems to be the point from which the involvement of the respiratory epithelium occurs. The comparative freedom of the lymphatic glands, together with the lobular glands, the clinical history of the disease seems to prove beyond question. This is somewhat surprising when we consider their derivation from the ciliated epithelium. So far as we know the lobular glands are not affected, while, on the other hand, the tubal glands are involved as uniformly as the thelia from which they are derived, and they very often appear to suffer even more severely.

In conclusion, Dr. Black states that the departure of the disease from the tissue of its election is found to be to the respiratory epithelium in the larynx, pharynx, and to the lymphatics in the connective tissue of the tonsils and post-lingual glands. In the case of a departure from the tissue of its election, it is accompanied by a radical change in the type of the inflammatory process.

The dangers of the disease are: first, life is threatened in the febrile stage from the effects of the greatly-increased temperature upon the nervous centres; second, life is threatened by the involvement of the kidneys, and dropsical effusions into the pericardium and other cavities; third, the involvement of the lymphatics of the throat and neck threaten life by the formation of abscesses, and consequent pyæmia, and by extension; fourth, by the involvement of the respiratory epithelium with its underlying tissue, troublesome chronic catarrh is likely to result; fifth, the involvement of the Eustachian tubes and middle ear threaten either a destruction of the organ of hearing, or second, life, by the escape of pus into the cranial cavity.

The next paper presented was by Dr. J. B. Richardson, of Louisville, on tubercular cerebral meningitis, and under the call for volunteer papers, Dr. Wm. H. Watheon, of Louisville, read on the subject of lacerations of the cervix uteri.

At 7.30 p.m., the Association re-assembled to listen to the address of the President, H. B. Buck, M.D., of Springfield, Illinois. It was then announced that at the beginning of the morning session the Society would be favored by an address from S. W. Gross, M.D., of Philadelphia. Accordingly, when the convention was re-opened, Dr. Gross read a paper on malignant tumors of the mammary gland. Dr. Gross's paper was founded on his observations in his work on this subject, and was warmly received. On the practice of medicine, Dr. B. M. Griffith, of Springfield, Ill., next read. In order to collect data for the foundation of this paper, Dr. Griffith addressed a number of questions to physicians throughout Indiana, Illinois and Kentucky, such as: "What are the prevailing diseases in your locality, and how treated?" "Give points in diagnosis, new or original;" "Give new or unusual therapeutics in your practice;" also, "application of old or new remedies to greater advantage than formerly."

To these questions very pointed and definite

answers had been received, the first usually absorbing all attention and answered in this definite manner. "The prevailing diseases are malarial, typhoid, inflammatory, and rheumatic; treated in the usual way." With this startling array of facts laid before him, Dr. Griffith noticed the views concerning disease that have held the sway in medical minds within the last decade. The favored of these views have been "exposure to cold," "insufficient clothing and food," "bad surroundings in general, and depressing causes of whatever nature." To a thinking mind, he adds, these causes are as unsatisfactory as a Hades of fire and brimstone to an Ingersoll. Excessive heat caused yellow fever, malarial fever, cholera infantum, etc. Excessive cold, inflammation of the respiratory apparatus, and serous tissues, and in the event of the absence of either of these causes, the changes had been rung on "arrested secretion." At the present time the weakness is in favor of innutrition. The division of pneumonia into catarrhal, croupous and hypostatic, was offered as a striking illustration of the advance made in nosology. Instrumental aids to diagnosis received attention.

Of the epidemic diseases that had prevailed none had been attended by a great increase in the mortality. In addition to the remedies usually employed in diphtheria, universal commendation of the antiseptic spray of carbolic acid and iodine in the local treatment had been heard. The same might be said of salicylic acid. The tried and the true remained the standard remedy throughout Illinois, for malarial disorders, though several cases had been successfully treated by inhalations of nitrite of amyl. Quinine hypodermically and without reference to fever or the condition of the bowels is being more extensively employed. A peach kernel bruised and given once every two or three hours had been signally successful in cases of chronic intermittents, and has also been found to be an efficient anti-emetic, its virtue probably residing in the hydrocyanic acid it contains.

Typhoid fever has prevailed, though not extensively, in all localities; whether contagious or generated *de novo*, it is *sui generis*. Quinine, the *sine qua non* in intermittent, is not exhibited except as a general tonic. Salicylic acid alone during the pyrexia, or in combination with belladonna, has been given with satisfactory results. The value of quinine in rheumatism and neuralgia is not fully appreciated.

Inflation and forced respiration are engaging the attention of the profession, and are meeting with success in chronic bronchitis and many other forms of pulmonary disease.

In reference to anesthetics, the A.C.C. mixture in parturition and minor surgical operations was highly lauded.

Among the new remedies noticed those which have stood the crucial test of experience, are: ingluvin in the vomiting of pregnancy, extract of broom tops in the general dropsy from renal disease, and extract of red clover in preventing the development of secondary cancer.

The forenoon session closed with the reading of a paper on State Medicine, by Dr. Horace Wardner, of Anna, Ill.

(To be Continued.)

EDITORIAL DEPARTMENT.

PERISCOPE.

The Diagnosis of Rotheln.

Dr. James Robinson writes, in the *Lancet*, Oct. 16:—

Rötheln in its general characters presents various degrees in severity, just as do the allied diseases, scarlatina and measles:—

The simple form, in which the rash is well out, the sore throat slight, and the irritation of the bronchial mucous membrane moderate, with slight coryza and sneezing.

The severe form, in which the catarrhal symptoms are still very perceptible, but in which the brunt of the attack is borne by the throat.

There is also an intermediate variety, in which the general symptoms are severe and the influence of the poison is exerted equally upon the skin and mucous membranes.

The period of incubation seems to vary, generally being about six or seven days, at the end of which time symptoms of a slight cold make their appearance, speedily followed by a considerable and sudden rise in temperature, hoarse cough, and sore throat, accompanied by watering of the eyes, headache in adults, or a convulsion in children, sickness, and sometimes severe vomiting. On the second day of the fever the rash makes its appearance, usually first on the neck and chest, afterwards the trunk, face and extremities, in patches of varying size, which soon coalesce and form larger ones less crescentic in form and of a brighter color than in measles, attended by considerable itching and perceptibly raised above the level of the surrounding skin. It begins to fade on the following day, its complete subsidence being rarely prolonged beyond the third or fourth day, with slight desquamation of the cuticle, which in mild cases is almost imperceptible. The temperature, at first very high, often reaching 103° or 104°, falls with the subsidence of the rash, except the throat symptoms (always present) predominate, when it continues high until the termination. The pulse may be 120 or 130, or even more frequent, declining suddenly with the temperature. There is sneezing, and the eyes are suffused, but severe coryza is absent. Hoarse and troublesome cough, with sometimes severe bronchial catarrh, are also present.

In mild forms of the disease it most resembles an attack of measles with sore throat of varying intensity and swelling of the cervical glands. In the more severe types, it is most like scarlatina anginosa, with the rash and catarrhal symptoms of measles. I have not observed any suppuration of the cervical glands, albuminuria, or dropsy, even when the scarlatinal symptoms seem to be in the ascendant. The most frequent complications seem to be bronchitis and pneumonia. The mortality in my experience is low, and death occurs most frequently from chest complications. The essential points in the differential diagnosis of rötheln from measles are

in the presence of the throat and gland symptoms, and the early period at which the rash makes its appearance; and from scarlatina, in the presence of the catarrhal symptoms, the character of the rash, the manner in which desquamation of the cuticle takes place, and the complete absence of the sequelæ common in scarlatina. The strongest evidence of its non-identity with these two diseases, separate or combined, is that it is non-protective against an attack of either, and *vice versa*; and this fact alone goes far toward establishing its claim to be classed as a specific and separate disease, possessing well-marked and distinctive diagnostic features from any other of the exanthema.

The Influence of Music on the Circulation of the Blood.

Dogiel, quoted in the *Lancet*, observes that music excites, both in men and in animals, pleasant and unpleasant sensations, the effects varying with the individual and with the quality of the music. The Greeks long ago discriminated several forms of music according to their influence on the body, under the names of Phrygian, Lydian, Æolic, and Doric styles. Aristotle saw in music one of the most important means of education, and Plato considered it to be necessary that music should be studied from the thirteenth to the sixteenth year. Pythagoras held that music might be made serviceable in the treatment of various diseases. In short, the ancients were well aware that the human body is powerfully affected by music. Dogiel made a series of experiments both on men and animals, the results of which he sums up in the following propositions. (1) Music exhibits an influence on the circulation of the blood, both in animals and in man. (2) The blood-pressure sometimes rises, sometimes falls. These variations in the blood-pressure depend essentially on the influence of the excitation of the auditory nerve on the medulla oblongata, which is apparently in direct continuation with the auditory nerve. (3) The action of musical tones and pipes on animals and man expresses itself for the most part by increased frequency of the cardiac contractions, and hence it follows that the automatic centres of the heart act with greater energy. (4) The variations in the circulation consequent on musical sounds coincide with changes in the respiration, though they may also be observed quite independently of the respiration. (5) Strychnia increases the effect produced by stimulation of the auditory nerves on the circulation, while curara diminishes it. (6) Chloral hydrate, as well as ethyl, alcohol and morphia (in a certain stage of the narcosis produced by them), diminish the action of the auditory excitation on the circulation. (7) The variations in the blood-pressure are dependent on the pitch and loudness of the sound, and on the tone color. (8) In these variations of the blood-pressure the idiosyncrasies of the indi-

vidual, whether man or animal, are plainly apparent, and even the nationality, in the case of man, has some effect.

REVIEWS AND BOOK NOTICES

NOTES ON CURRENT MEDICAL LITERATURE.

—"How a Person Threatened or Afflicted with Bright's Disease Ought to Live" is the subject of a neat little monograph of 87 pages, by Joseph F. Edwards, M.D. It is divided into four parts, Part I containing general remarks on Bright's Disease, Part II treating of the functions of the kidneys and their derangements, Part III giving the pathology of Bright's Disease, and Part IV, Rules of Life. It is published by Presley Blakiston, 1012 Walnut street, Philadelphia. Price 75 cents.

—We have just received, in a volume of 97 pages, 8vo, "The Acts of the Legislature of Louisiana, Establishing and Regulating Quarantine for the Protection of the State; Organizing and Defining the Powers of the Board of Health, and Regulating the Practice of Medicine, Midwifery, Dentistry and Pharmacy, and also Rules and Regulations of the Board of Health of the State of Louisiana, and Health Ordinances of the City of New Orleans," by Joseph Jones, M.D., President of the Board of Health of the State of Louisiana.

BOOK NOTICES.

Diseases of the Throat and Nose, including the Pharynx, Larynx, Trachea, Oesophagus, Nasal Cavities, and Neck. By Morell Mackenzie, M.D., Senior Physician to the Hospital for Diseases of the Throat and Chest, Lecturer on Diseases of the Throat at the London Hospital Medical College, etc. Vol. I. Diseases of the Pharynx, Larynx, and Trachea. Philadelphia, Presley Blakiston, 1012 Walnut street, 1880. Cloth. 8vo, pp. 570. Price \$4.00.

This work is divided into three sections, treating of diseases of the pharynx, larynx, and trachea, respectively. It is, the author informs us in his preface, based partly on the courses of lectures which he has annually delivered at the London Hospital Medical College during the last twelve years, and partly on his essay on "Diseases of the Larynx," to which the Jacksonian prize was awarded by the Royal College of Surgeons of England. The author treats his subject in a thorough and systematic manner, and his large experience and intimate acquaintance with the results of the labors of others, are

sufficient guarantee that the book is fully up with the times. With regard to the use of mercury in syphilis, he entertains the views of Prof. Sigmund, of Vienna, and never employs it as an internal remedy, except in extreme cases, where local measures have failed. The work is well illustrated, and has an appendix containing special formulæ for topical remedies, such as steam and spray inhalations, gargles, lozenges, pigments, insufflations, and nutritive enemata. The book is gotten up in the usual elegant style of the publishers.

Handbook of Chemical Physiology and Pathology, with Lectures upon Normal and Abnormal Urine. By Victor C. Vaughan, M.D., Ph.D., Lecturer on Medical Chemistry in the University of Michigan, etc., etc. Third edition, revised and enlarged. Ann Arbor Printing and Publishing Co. 1880. Cloth, 8vo, pp. 351.

The nature of this work is fully explained by its title, and to those interested in the study of the subject whereof it treats, it will prove a valuable aid. The first seventy pages are devoted to the subject of digestion, including the analysis of the saliva, the gastric juice, the bile, the pancreatic and intestinal juices and the feces. The blood, lymph and chyle are next taken up for consideration, and then the spermatic fluid and milk. The solids of the body, epithelium, hair, elastic and connective tissue, cartilage, bone, muscle and nerve tissue are next examined; the remainder, or nearly one-half of the book, being devoted to the urine, its normal and abnormal constituents, and the detection of medicinal substances therein. Twenty-eight plates with forty-eight illustrations are appended. The student of medicine and the scientific practitioner will undoubtedly find this work useful.

The Physician's Visiting List for 1881. Philadelphia, Lindsay & Blakiston. Price \$1.25.

This well-known and admirably arranged visiting list has now reached the thirtieth year of its publication. It is arranged for fifty patients per week, and contains, in addition to blank pages for monthly memoranda, addresses of patients and others, nurses and their references, accounts asked for, memoranda of wants, obstetric engagements, vaccination engagements, records of births and deaths, etc., etc., an almanac, table of signs, Marshall Hall's ready method in asphyxia, poisons and antidotes, the metric or French decimal system of weights and measures, posological table, and table for calculating the period of gestation.

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WHAT DETERMINES THE SEX OF CHILDREN!

So many interests centre in the discovery of the laws which determine the sex of children, that no apology is needed for bringing the more recent views on the subject to the attention of readers.

The latest studies exclude, or nearly exclude, any supposed information which could be derived from the study of sexual development in plants or the lower animals. In the former, it is principally a matter of nutrition, and to some extent so in the latter; while in man this is certainly not the case.

The first question is, *When* is sex determined? Is it at the time of conception or subsequently?

The answer to this appears to be given by the facts connected with double and triple births. It is in the human race a law, without exception, that *twins embraced in the same chorion are of the same sex*. Three explanations of this fact suggest themselves: 1. They are of the same sex because they are nourished by the same maternal

blood; but this fails, because then twins must always be of the same sex, which they are not. 2. They are of the same sex, because they are equally nourished from the same placental vessels; but this fails, because when one is amorphous, acephalous, or stunted, the sex remains the same. 3. That the sex was determined at the moment of conception; which is the only theory left. But what is true of twins, must be true of single births; therefore, we reach the decision that sex is fixed by the circumstances of conception. Such is the reasoning of Dr. Mayerhofer (*Von der Zeugung des Menschen*), and it seems conclusive.

The next question is, are the ovula or spermatozoa divided sexually, so that a given ovum, or spermatozoon can only produce one sex, or is it a matter which depends on the relative condition of the parents at the time of cohabitation?

The former theories have been often maintained. Prof. Schultze teaches that the ovula in the ovary are fitted, some to develop only male, others only female infants. The ancients thought that the secretion of the one testicle produced males, of the other females.

Both these and all similar theories cannot stand criticism. A very extensive and careful study of marriages, occurring over Germany, France and England, conducted by independent statisticians, leads directly to the formulating of the following rule: *Whichever party to coition is at the time in the fullest possession of his or her reproductive powers will determine in the embryo his or her sex.*

The facts are, that quite young men marrying women older than themselves, and quite old men, marrying vigorous women, both beget more girls than boys. Husbands, as a rule, being older and more vigorous than their wives, as a rule more boys than girls are born (106 boys : 100 girls). When those marriages are taken in which the husbands are all older, but not more than ten years older than their wives, the population of children is about 700 boys to 600 girls.

There is hardly any doubt that the physical condition of the parent at the time of conception influences the sex in the direction that the most

vigorous sex tends to perpetuate itself. It is part of this rule that when the male cohabits rarely, and thus has more vigorous and numerous spermatozoa, the children are more apt to be male. This is undoubtedly the case with lower mammalia, and may explain the fact that orthodox Jewish families have more boys than Christian ones, the male being restricted in the times of cohabitation by Leviticus, chapter xv, verses 19-28.

It is easy to misinterpret the facts in relation to this question. Quite recently, a writer in the *London Lancet* (Oct. 23d, 1880), maintained that sex is determined by the *relative ardency* of the two parents; a preponderance of impulse on the part of the male parent produces female offspring, while excess on the part of the female parent produces male progeny. Among the facts he alleges in support of this opinion, are the following: (a) The first children of quickly married parents are generally females. This is particularly noteworthy in the case of men marrying with a strong feeling of personal affection, or an especial desire for heirs. (b) Children born as the result of unions in which the female parent is not a consenting party, or is averse from the union, are almost invariably females. (c) Female children commonly resemble their male parents in early life, and at the successive periods of change occurring in the course of development and decadence. On the other hand, the offspring of unions, or periods, in which the female parent is the more ardent are nearly always males. (a) The first children of parents whose union has been long delayed, are generally males; so also are those of unions in which the male parent is not specially attached to the female. (b) The offspring of unions in which the desire of the male parent for an heir has become less ardent, while that of the female parent has increased, are generally males. (c) Children born under circumstances in which the female parent is the more exigent are, with rare exceptions, males.

Now, as we above stated, when the male is temperate in indulgence, either from lack of affection, absence or prudence, the spermatozoa are

more vigorous and more apt to perpetuate the male sex; when the male exhausts the vigor of his secretion by repeated drains, the ovum gains the preponderance of power, and perpetuates its sex. We do not believe that a single one of the above facts proves that *ardency*, that the sexual passion, in other words, has *directly* anything to do with deciding the sex. It is a concomitant, not a cause. This mistake leads the writer in question to formulate a law almost the reverse of the one we are defending. His law is: "Granted a predominance of the procreative force on one side of the parentage, the offspring will be found of the *opposite* sex."

The simple fact he overlooks is that procreative force and sexual passion are not identicals but almost opposites. Yet a little reflection will convince any one that violent sexual passion almost always excludes procreation. Obstetricians know that a common cause of sterility is very frequent cohabitation (Billroth, *Handbuch der Frauen-Krankheiten*, Ab. vii, s. 60). Hence, it is not the preponderance of procreative force or the ardency of the one parent which leads to the children being opposite in sex, but it is the fact that the other parent, with less ardency, retains the force and expends the powers of the generative system, not in "a waste of passion," but in imprinting sex on the embryo.

NOTES AND COMMENTS.

The Specific Agent of Typhoid Fever.

The *British Medical Journal* says that Professor Klebs, of Prague, believes that he has discovered the micro-organism which constitutes the specific agent of typhoid fever, and develops his views in a paper entitled "Der Ileotyphus eine Schistomycose," published in the *Archiv für Experimentale Pathologie*, t. xii, p. 231, 1880. Professor Klebs has for a long time, assisted by his pupils, been making researches in this direction. He writes that he has been able to find, at the necropsy of twenty-four persons carried off by dothineritis, microbes in various organs: in the intestinal mucous membrane, in the thickness of the cartilages of the larynx, in the pia mater, in the foci of lobular pneumonia, in the mesenteric ganglia, in the parenchymata of

the liver, and generally diffused in the organs which showed the most decided lesions. These micro-organisms showed themselves in the form of rods, about eighty micrometers in length and 0.5 to 0.6 micrometers in thickness. They have been constantly observed in the bodies of dothenteric patients since the attention of Professor Klebs was drawn to the subject, and they are always absent from the organs, and specially the intestines, of subjects who have died from any other disease than typhoid.

The Contagium of Gonorrhoea.

Dr. W. Watson Cheyne published in one of the English journals, last July, a theory of gonorrhoea, which he attributes to the presence of organisms; and on this theory he based a plan of treating it with bougies of iodoform and eucalyptus oil, which, he stated, would remove the disease in a week or ten days.

There is nothing new in this theory, nor anything remarkably successful in the results. Dr. Neisser, in 1879, had a good deal to say about them (*Centralblatt für Med. Wiss.* No. 28); and Dr. Salisbury, years ago, claimed to have demonstrated them. In May, of this year, they were again described in a Hungarian journal by Dr. A. Bokai, who gives his investigations further in the *Allg. Med. Cent. Zeit.* (Sept. 15, 1880). The sum total of these studies is that micrococci are found in gonorrhoeal pus; the gonorrhoeal poison is supposed to be produced by them; but these micrococci do not differ, either in form, size or any other visible characteristic, from those found in non-infectious laudable pus.

This, we submit, is such a conclusion, that any calm investigator will continue to hold under doubt whether the micrococci have anything to do with the infection.

Cure of Grave Case of Hysteria by Simulation of the Operation of Spaying.

At the meeting of the Medical Society of Berlin, January 14th, 1880, reported in *Berlin Klin. Woch.* Dr. Israel reported the following case: A girl of 23, suffering from great pain in the region of the ovaries, with incoercible vomiting, which had reduced her to a very feeble state, was considered in so grave a condition that several of her physicians terrified her by proposing spaying as the sole means of relief. Finally, great preparations were made for the operation, the patient was put under the influence of an anæsthetic, and a large superficial incision was made in the region of the ovaries. The patient

fully believed that the grave operation had been performed, and for several days complained of great pain in the abdomen; there was retention of urine for twelve days; but gradually the vomiting ceased, abnormal pain was no longer complained of, and the patient appears completely cured. This is another instance of the influence of imagination on hysterical complaints, an influence which Charcot considers of great account in most cases of hysteria uncomplicated with epilepsy.

Fetid Sweating of the Feet.

A simple and effective method of dealing with that annoying infirmity is suggested by a correspondent of the *British Medical Journal*. He says:—

All that is necessary is to strap the affected portions of the sole of the foot as smoothly as possible with tolerably wide straps of ordinary adhesive plaster—either *emplastrum saponis* or *emplastrum plumbi*. Every part should be completely covered, and with two layers of plaster if the complaint be very bad. The plaster should be taken off and renewed in three or four days, and once again at the expiration of a week, when the skin will be found to be quite healthy, having its normal yellowish appearance, and will also be quite dry. The odor ceases from the first application, and the patient will walk away in comfort. One may with confidence predict, even in the most severe case, a perfect cure in the time mentioned.

There seems to be in some persons a tendency to relapse after an interval of some weeks; but on the slightest sign of reappearance of the disease, it is only necessary to cover the patch with a single strap of plaster, which will at once arrest its progress, remove the fetor, and speedily exert its curative influence.

Health Rate of Foreign Cities.

In spite of its damp and raw climate, English cities are the most healthful in the world. In the second quarter of this year the annual rate of mortality in twenty of the largest English towns, having an aggregate population of about seven and a half millions of persons, averaged only 20.4 per 1000, whereas in twenty European cities the rate averaged 32.4. This remarkable excess in the death-rate signifies that the mortality in the European cities was 59 per cent. higher than that in the English cities, or, in other words, in equal numbers living, 159 died in the foreign cities to each 100 in the English

cities. This marked excess in the death-rate in the foreign cities is pretty constant. To be sure, Dublin shows a death-rate of nearly 40 per 1000, but Ireland is hardly to be counted in Great Britain when the general sanitary condition is under discussion.

Results of Marriages with Idiots.

Dr. Berkhan, in the *Zeit., für Psych.*, Vol. 37, makes some interesting observations as to the capabilities of microcephalic and other idiots to propagate their species. A semi-idiotic man has been married for some years to a healthy woman; there is no family. A healthy man, married to an idiotic wife, has had three children by her; two of them are idiots. These cases support Vogt's view, that while female idiots may bear children, the males are very frequently incapable of begetting them. Marriages are very rare between male half-cretins and healthy women, but are not uncommon between healthy men and semi-cretinous females who may happen to own a little property. The author has never seen the progeny of these marriages arrive at maturity; if not still-born, the children usually die during childhood.

Two New Anæsthetics.

The discovery of two new anæsthetics is announced by Dr. Edward Tauber, of Jena, in the *Centralblatt*, October 16. The one of these is methylchloroform. He tried it upon animals, and afterwards upon himself. Its action is very similar to that of chloroform, and it does not seem to possess any advantages over it. The second anæsthetic is also closely allied to chloroform, resembling it in odor, specific gravity and boiling point. Its effect, however, would appear to be more prompt and more temporary than chloroform. The chemical names of these substances are, respectively, monochloræthylidenechlorid and monochloræthyleuchlorid. These brief and convenient names will, no doubt, add to the popularity of these substances.

Some Account of Resorcin.

This substance is chemically similar to carbolic acid. It has recently been attracting considerable attention as an antiseptic and antipyretic. Its chemical composition is $C_6H_4(HO)_2$. It is extremely soluble in water and in alcohol, and in odor it resembles phenol. Professor Biermer, of Breslau, reports some of the latest experiments with it. He gives it in doses from a half to one drachm hourly. It brought about

a decided fall of temperature in fever patients, but of only temporary duration, and followed by an exacerbation of the fever. These large doses did not produce any symptoms of poisoning, but on the whole Professor Biermer advises against the use of the drug, as of doubtful value.

There is Death in the Pot.

These chemists are constantly discovering something to make one feel uncomfortable. Arsenic in the air of our rooms and germs in the water we drink, not to speak of lead in our wine and strychnine in our whisky, are bad enough; but here come Messieurs Brouardel and Boutmy, who communicate to the French Academy of Sciences the agreeable information that they have discovered an alkaloid resembling that extremely fatal poison, veratria, in a roast goose, bought that day in the market. They add, that such poisonous substances are sometimes formed in a few hours after death in the bodies of animals, and may at any time develop in edible meats!

Bloodless Excision of the Mammary Gland.

Several cases are reported by Dr. Leisrink, in the *Centralblatt für Chirurgie*, No. 30, 1880, in which he removed the mamma without the loss of a drop of blood! The patients had pendulous breasts, and hence, favorable for the operator. He prepared an apparatus, having two metal rods at the sides, and a movable cross-piece at each end. These cross-pieces could be screwed closely together. The breasts were first emptied of blood by pressure and manipulation, and then the apparatus adjusted. He found it much superior to any modification of the Esmarch bandage.

Hygienic Treatment of Varicocele.

Dr. P. Vautier, in a recent thesis, rejects the suspensory bandage in the treatment of varicocele, on the ground that it supersedes the natural support given to the testicles by the contractile dartos tunic and by the cremaster muscle, the tonic contraction of the latter especially aiding constantly in the emptying of the spermatic veins. These natural forces are lost if the parts be artificially supported, while the heat generated by the bandage also tends to prevent the scrotum from contracting. The author advises rather, in the early stages of the affection at least, prolonged rest in the horizontal position, varied by gymnastics or other moderately violent exercise.

CORRESPONDENCE.

"Is Shampooing Advisable?"

ED. MED. AND SURG. REPORTER:—

In your issue of November 13th a short article with the above heading is found, in which you quote Dr. Rumbold, from his treatise on "Catarrh," as saying that it is not; and me, from my recent treatise on "The Hair, its Care, Diseases and Treatment," as saying that it is, and ask that the question be brought to an issue.

The catarrhal side of the question was not mine to consider; it was the hair only that I was looking out for. Still, so far as catarrh is concerned, I can see no harm from a proper cleansing of the scalp surface. Shampooing, in the ordinary sense used, and including the barber's application of compounds, I do not consider healthful to the hair or scalp, if frequently applied. It is the remedy used, and the manner and time of using it that makes the barber "shampoo" unhygienic. They use, as a rule, *strong* alkaline solutions, sometimes fairly caustic in their action, then douse your head off with a hydrant attachment (no objection, if they *thoroughly* dried the scalp, so far as the hydrant is concerned, either hirsutically or catarrhally, so far as I can understand), and then send you out into the cold air, oftenest that of the evening, with damp, if not positively wet locks clinging to your head. Catarrh and scalp troubles could easily be brought about in this manner. Possibly this is the point Dr. Rumbold had specially in view.

In your article you say, "Dr. Leonard, in his book on the hair, recommends that it be washed several times a week with soap and water." This is hardly a fair statement, since frequent washing I only recommend in certain scalp diseases; and this only when the scalp can be thoroughly dried; and afterwards an oleaginous preparation is usually to be used. On pages 86 and 89, in the chapter devoted to the hygienic care of the hair, I say: "The adult scalp should be thoroughly washed *as often as once a month*, at the very least; a daily brushing will not suffice; brushing does not remove the oily particles from the scalp, except when dried down with dust and the scarf-scales of the skin.

"One of the best cleaning substances I know of, for either male or female to use, is the yolk of an egg. This should be well rubbed into the roots of the hair, and upon the scalp; then the whole washed out with tepid water and *Castile soap*, rinsing with clear, cold water. This done, it should be *thoroughly dried* by brisk rubbing with towels, so as to get a roseate glow to the scalp, thus bringing a larger supply of blood to the hair papillæ; if found too dry, a little pomade could be applied. The coconut oil is probably the best of any. Purified beef's marrow could also be made use of, though vegetable oils are the best to use, as they are less apt to become rancid."

In speaking of children's heads, in a preceding portion of the same chapter, referring to the general cause of eczema, I say: "This condition of affairs (milk crust, etc.) should not be allowed to take place, and it would not if proper attention were paid to the child's scalp. Washing the

baby's head in lukewarm water, with Castile soap, twice or three times a week, or oftener if necessary, should be practiced from birth up; then a daily brushing of the hair should be made," etc.

Now, it is my opinion that a washing of the head, as above described, will have no tendency to produce catarrhal troubles; leastwise, it is most certainly beneficial to the scalp, and promotes the growth of the hair. In youth and childhood more sebaceous matter is poured out from the hair follicles than in adult life; hence, more frequent washing is then necessary. But the same precaution should be observed about getting into drafts of cold air until the hair is thoroughly dried, as in the case of adults. But no one more than I discounts the frequent barber's "shampoo;" irritating materials are used for the lather; indeed, the lather is made at the expense of the oleaginous materials of the scalp; your scalp is but very imperfectly dried, and then you rush out into the cold air, to drive, or to walk about the streets to attend to your duties. Under such circumstances catarrhal troubles may well set in. Indeed, it is a wonder to me that we do not have more of them than we do.

This leads to the consideration of another point intimately connected with this, and that is *shaving*. Here catarrhal and quinsy troubles are apt to arise, in cold weather, when caution is not used. On page 312 of my hair treatise, I have also referred to this. The "closer" you shave the more chance you have for contracting neuralgia or catarrhal diseases, since at each shave you remove not only the hair, Nature's protector, but also the scarf-skin, in great measure, from your faces. It would be as sensible to leave off half of your woolen undershirt. No wonder you have sore throats, and the like, from such nonsense. I once practiced it, and regularly, Spring, Fall and Winter, I had a beautiful time with quinsy. I stopped shaving some seven years ago, and not an attack of quinsy since. Dozens of others, who have had the stamina to follow my advice, have also ceased to suffer from a like complaint.

But I am wandering from the subject directly in hand. In no place in my book have I recommended any other wash than Castile soap, the purest and mildest of all cleansing substances, as a hygienic measure. And then I have, and do, in my practice, insist that the hair shall be *thoroughly* dried before the usual tonic-dressing is applied. This tonic-dressing is oleaginous in its character, being made up of coconut oil, tr. cantharides, capsicum, nux vomica and bay rum, or Cologne water. Yours truly,

Detroit, Nov. 16, 1880. C. HENRI LEONARD.

The prescription for tonic is usually about as follows:—

R.	Tr. cantharidis,	$\frac{3}{4}$ ss
	Tr. capsici,	$\frac{3}{4}$ ss (j).
	Ol. cocœ,	
	Ol. ricini,	aa $\frac{3}{4}$ j
	Spt. myristice,	
	Aq. Cologniensis, q. s.	ad $\frac{3}{4}$ iv. M.

Sig.—Shake well.

Hair tonic. Apply once or twice daily.

NEWS AND MISCELLANY.

The Largest Man in America.

The largest man on this continent was the late Lewis Cornelius, of Pike County, Pa. He was considerably larger than Daniel Lambert. Mr. Cornelius' dimensions are entered upon the record books in the Prothonotary's office at Milford, Pike county, as follows:—

- "Lewis Cornelius—Born 1794.
- "Height, 6 feet.
- "Circumference below waist, 8 feet 2 inches.
- "Circumference above waist, 6 feet 2½ inches.
- "Circumference of arm above elbow, 2 feet 2 inches.
- "Circumference of arm below elbow, 1 foot 9 inches.
- "Circumference of wrist, 1 foot 3 inch.
- "Circumference of thigh, 4 feet 2 inch.
- "Circumference of calf of leg, 2 feet 7 inches.
- "Circumference of ankle, 1 foot 7 inches.
- "Weight, without any clothing whatever, 645½ pounds."

This is the only authentic record of Mr. Cornelius' size extant. As he had been sick some time, he lost over 50 pounds of his weight. He was not weighed until after his death, and when in full health would have tipped the scales at 700 pounds. His wife was a very slight woman, and weighed just 100 pounds.

The Tricycle.

The tricycle is recommended, in England to country physicians, instead of a horse. A clergyman writes of his tricycle:—

"I have traveled about 800 miles by this time, on pleasure trips in North Wales, and latterly in Derbyshire, on my work of deputation for the Society for the Propagation of the Gospel, and have found it a great comfort and pleasure. From seven to eight miles an hour is my speed, and I can do fifty miles per day. I can ride up any hill almost. I carry my portmanteau with me, and carried my boy, aged twelve, behind me for thirty-four miles once. If I were in a country place and wished to save a horse I should do so by keeping a tricycle. It wants no grooming, no corn, no tax, no gates. You can leave it at the door of a cottage and want no one to hold it, and, better than all, it has done my health (which was shattered abroad) more good than all the physic I have swallowed, and I cordially recommend it to both clergymen and physicians."

St. Mary's Hospital.

A special ward has been set apart by the management for the treatment of diseases of the eye and ear. The regular clinics for the treatment of diseases of the eye and ear are held on Tuesdays, Thursdays and Saturdays, at 3 p.m. H. Augustus Wilson, M.D., Attending Surgeon.

Back Numbers.

We will pay 20 cents each for a few copies of the REPORTER, No. 1077; and 10 cents each for any of the following numbers: 1094; 1088, 1081, 1045, 1036, 932, 880, 879, 827, 672, 670, 562, 568, 561, 544, 524, 517, 503, 207, 185, 181.

Items.

—An old lady who has several unmarried daughters feeds them on fish diet, because it is rich in phosphorus, and phosphorus is the essential thing in making matches.

—Among the most hard-working young doctors of the Vienna hospitals is the Duke Charles Theodore, of Bavaria, brother of the Empress Elizabeth. He took his diploma some time ago and has practiced assiduously ever since. He is a regular attendant at the lectures of Professor Arit, and is a clever operator.

—A gentleman went home the other night with a severe cold, and said to his wife, "I have to-day been told to take hot teas—pennyroyal tea, barley tea, baked lemon tea, beef tea, curry tea, hop tea, celery tea, liquorice tea, red pepper tea, baked onion tea, mint tea, hay tea, baked apple tea, and burnt sugar tea." "Well," said the sympathizing wife, "which do you think you will take?" "If you have no objections," said he, "I think I will take the hot gin sling."

QUERIES AND REPLIES.

Flatulent Dyspepsia.

MR. EDITOR:—Can you or any of our friends tell me how to cure the distressing disease called "Flatulent Dyspepsia?" The writer has given nuxvomica and glycerine a fair trial, with only partial results. The last named acted very satisfactorily upon the bowels, but caused distress while being digested. Any new light upon this old subject will be gratefully received by
Yours, respectfully,
W. S. J.

Dr. V. S. of Pa.—The courts, both in this country and England, have decided that the relatives or heirs have no property right in the corpse of a deceased person. They have no right to sell it, nor can they obtain damages for a post-mortem examination made upon it.

On dit.—We should be pleased to receive and publish any items of personal information likely to interest the medical community.

MARRIAGES.

MARKS—HARPER.—On the 10th inst., by Rev. A. B. Maxwell, at the house of James Harper, Esq., R. T. Marks, M.D., and Miss Florence C. Harper, all of Leetonia, Ohio.

PHILLIPS—RHOADES.—On November 17th, 1890, at the residence of the bride's parents, Cochransville, by Rev. W. Downey, pastor of Ebenezer M. E. Church, W. L. Phillips, M.D., of Philadelphia, and Miss Laura H. Rhoades, of Cochransville, Chester county, Pa.

REEVES—LEWRY.—On November 4th, 1890, by the Rev. Samuel Laird, at St. Mark's Evangelical Lutheran Church, Joseph M. Reeves, M.D., and Josephine Lewry, both of this city.

DEATHS.

BURMEISTER.—On the 15th instant, Dr. F. F. Burmeister, formerly Surgeon of the 69th Pennsylvania Regiment.

GERHARD.—Suddenly, on the 16th instant, Anne Gerhard, widow of the late William W. Gerhard, M.D.